

## **REMARKS**

### **Status of the Claims**

Claims 8-9, 12-13, and 19-32, 34-40, and 42-45 are pending in this application.

Claims 8-9, 12-13, and 19-45 are rejected.

Claims 33 and 41 have been cancelled, without prejudice.

Claims 8, 9, 19-22, and 43 have been amended. Support for these amendments can be found throughout the specification, claims, and drawings, as originally filed.

### **Rejection of Claims 8-9, 12-13, and 19-45 Under 35 U.S.C. § 102(e)**

Claims 8-9, 12-13, and 19-45 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,693,419 to Stauth et al. (hereafter "Stauth '419").

The Applicant respectfully traverses the 35 U.S.C. § 102(b) rejection of claims 8-9, 12-13, and 19-45. Claims 33 and 41 have been cancelled, without prejudice. The Applicant respectfully requests reconsideration of the rejections based on the following remarks.

The law is clear that anticipation requires that a single prior art reference disclose each and every limitation of the claim sought to be rejected. The law is also clear that a claim in dependent form shall be construed to incorporate all the limitations of the claim to which it refers.

Rejected Claims 8, 19-22, and 43 are all independent claims which have been amended to include the limitation of the supervisor circuit changing the signals to a diagnostics range in response to an electrical failure in one or more of the sensor element or output circuits, and combinations thereof. Independent claim 9 has been

amended to include the limitation of the supervisor circuit changing signals to a diagnostics range in response to an electrical failure and one or more of the sensor element, output circuits, or shared circuits, and combinations thereof. Applicant maintains that Stauth '419 does not disclose these elements.

Stauth '419 is directed to a circuit for maintaining and varying a signal in response to variations in field strength. There is nothing that discloses responses due to electrical failure in the sensor elements or the output circuits as recited in independent claims 8, 19-22, and 43. Furthermore, there is nothing that discloses the circuitry responding as a result to electrical failure in the shared circuitry as recited in independent claim 9. Figure 1 of Stauth '419 shows a circuit that has the disadvantage of the DIFF signal value occurring between times t4 and t5 is not detected, thereby causing an output transition of the POSCOMP signal to be skipped in a passing magnetic article to go undetected. *See Col. 2, Lines 39-42.* Stauth '419 addresses the problem of missing the passing of a magnetic article when the signal is not maintained. This is a problem that is addressed by the later figures in Stauth '419. There is nothing discussed in the background of the invention that discloses electrical failures of the sensor, output circuits, or shared circuits. The DIFF signal does not change due to an electrical failure but instead changes as a result of the magnetic articles passing the sensor element.

Stauth '419 discloses circuits that utilize a tracking signal to make adjustments to the DIFF signal in order to solve the problem of missing the passing of a magnetic article when the signal is not maintained. *See Col. 10, Lines 53-66.* Since Stauth '419 does not disclose a supervisor circuit that changes the first and second output signals to a diagnostics range in response to an electrical failure with the sensor element or the output circuits or combinations thereof, Applicant submits that the rejection of claims 8,

19-22, and 43 should be removed. Additionally, Stauth '419 does not disclose a supervisor circuit that changes the first and second output signals to a diagnostics range in response to an electrical failure with the sensor element, output circuits, shared circuits, or combinations thereof as set forth in rejected claim 9. Furthermore, rejected claims 12-13, 23-42, and 44-45 depend either directly or indirectly from the aforementioned independent claims. The rejection of these dependent claims should also be removed.

In further regard to Stauth '419, Applicant also argues that the alleged supervisor circuit (58) is only acting in response to a variation with the signal DIFF generated from the exclusive-OR gate (74). The OR gate (74) is comparing the COMPOUT signal with the POSCOMP signal and generates a HOLD input signal to the counter (78) of the circuit (58); thus, the circuit (58) is not reacting in response to an output from the sensor element, or the output circuits, but instead is acting in response to the POSCOMP and COMPOUT signals which are derived from upstream circuitry. The upstream circuitry includes outputs from the circuit (58) as well as the sensor element (62) and the alleged first and second outputs (64,68) but does not react to these components individually. Stauth '419 does not disclose a supervisor circuit that reacts in response to signals from the sensor element, the output circuits, or combination thereof as set forth in claims 8, 19-22, and 43. Additionally, there does not appear to be any evidence that the circuit (58) of Stauth '419 is reacting in response to signals from the sensor element (62), alleged shared circuits (60), or alleged first and second output circuits (64,68), or combinations thereof as set forth in rejected claim 9. For this reason alone Applicant does not believe that rejected claims 8, 9, 19-22, and 43 are anticipated by Stauth '419. Furthermore, rejected dependent claims 12-13, 23-42, and 44-45 which depend either

directly or indirectly upon the rejected independent claims, are also allowable by virtue of their dependency.

Applicant also maintains that Stauth '419 cannot be used to render the claimed invention obvious since the alleged supervisor circuit (58) would not function if modified to react to electrical failures. The circuitry presented in Stauth '419 utilizes comparisons between a voltage threshold signal and voltage tracking signal to the DIFF signal generated by the output sensor. The response to the comparison of these three signals, POSCOMP and COMPOUT signals are generated and ultimately a HOLD signal is transmitted from the OR gate (74) to the counter (78). *See Stauth '419 at Fig. 3; Col. 5, Lines 6-14.* The POSCOMP and COMPOUT signals are used to make adjustments to the DIFF signal. *See Col. 10, Lines 53-66.* If an electrical failure were to occur in the sensor element, alleged shared circuitry (60), or alleged output (64,68) the stated purpose of Stauth '419 making adjustments to the DIFF signal, would not be possible. Furthermore, there is nothing in Stauth '419 that would teach or render obvious a supervisor circuit that operates in response to electrical failures in the sensor element, output circuits, or combinations thereof as set forth in rejected claims 8, 19-22, and 43. Additionally, there is nothing in Stauth '419 that would teach or suggest a supervisor circuit that reacts to electrical failures in the sensor element (62), first and second output circuits (64,68), shared circuits (60), or combinations thereof as set forth in rejected claim 9. As stated above, Stauth '419 reacts to the signals POSCOMP and COMPOUT which are evaluated by the OR gate (74) and does not react to the upstream circuitry. Modifying Stauth '419 to achieve such a purpose would not be obvious. For all the above reasons, Applicant submits that rejected claims 8-9, 12-13, and 19-45 would further not be rendered obvious by Stauth '419.


## CONCLUSION

It is respectfully submitted that in view of the above amendments and remarks, claims 8-9, 12-13, and 19-32, 34-40, and 42-45, as amended, are patentably distinguishable because the cited patents, whether taken alone or in combination, do not teach, suggest or render obvious, the present invention. Therefore, Applicant submits that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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